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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,424	01/30/2004	Ralph A. Duncan	1875.1210005	4531
26111	7590	08/23/2004	EXAMINER	
STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			CUNNINGHAM, TERRY D	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/767,424

Applicant(s)

DUNCAN ET AL.

Examiner

Terry D. Cunningham

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 12 and 14-20 is/are rejected.
- 7) ☒ Claim(s) 10 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to because Fig. 4 shows element 414 being labelled as an SAR, but such is now disclosed as and “A/D converter”. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-7, 12 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, “an amplifier” has already been recited in claim 1.

In claims 6 and 7, it is not understood whether “the amplifier” is referring to the one recited in claim 1 or in claim 5.

In claim 12, “an amplifier” in the “tuning device” has already been recited in claim 1.

Claim 13 is rejected as including the indefiniteness discussed above with claim 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a

person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Okanobu (USPN 5,942,935) in view of Lee (USPN 4,331,944). Okanobu discloses, in Fig. 6, a circuit that will provide a method having the steps: “forming a filter through coupling a first resistor (R52) having a first resistance value and a capacitor (C52) having a first capacitance value; “setting a corner frequency of the filter using the first resistance value and the first capacitance value; and “forming a tuning device through coupling a second resistor (R63) having a second resistance value...a third resistance value (R61), and a comparator (631, 62 and 64) having an amplifier (631) and a signal converter (62 and/or 64); and “comparing voltage signals using the comparator to produce a control signal that adjusts the first and second resistance values as a function of the third resistance value. Thus, the circuit Okanobu discloses all the recited steps and corresponding circuit elements except for R61 being a “switched-capacitor”. Resistor R61 is seen to be a fixed resistor. However, it is notoriously well known, such as taught in the reference to Lee, that a fixed resistor can be simulated using a “switched-capacitor”. The “switched-capacitor” type resistor of Lee is disclosed as having reduced parasitic effects. Therefore, it would have been obvious for one skilled in the art to use the specific “switched-capacitor” type resistor for the broad fixed resistor R61 of Okanobu to obtain the expected advantages of reduced parasitic capacitance.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okanobu (USPN 5,942,935) in view of Lee (USPN 4,331,944) in further view of Schultz et al. (6,166,591) or McPartland (USPN 5,604,501). The above combination of Okanobu in view of Lee fails to disclose any specific details for variable resistors R52 and R62 in the reference to Okanobu. It is notoriously well known that digitally controlled resistances, such as disclosed in Fig. 4 of

Schultz et al. or Fig. 1 of McPartland, provide a specific variable resistance with accurate control. Therefore, it would have been obvious for one skilled in the art to use one of the specific digitally controlled resistors of Schultz et al. or McPartland to obtain the expected result of accurate resistance value control.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terry Cunningham whose telephone number is 703-308-4872. The examiner can normally be reached on Monday-Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 703-308-4876. The fax phone numbers for Technology Center 2800 are 703-872-9318 for Before Final communications and (703) 872-9306 for After Final communications. Please note, any faxed paper clearly stating **DRAFT** or **PROPOSED AMENDMENT** at the top will be forwarded directly to the Examiner. All others will be treated as a formal response and acted upon accordingly.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is 703-308-0956.

TC
August 21, 2004


Terry D. Cunningham
Primary Examiner
Art Unit 2816